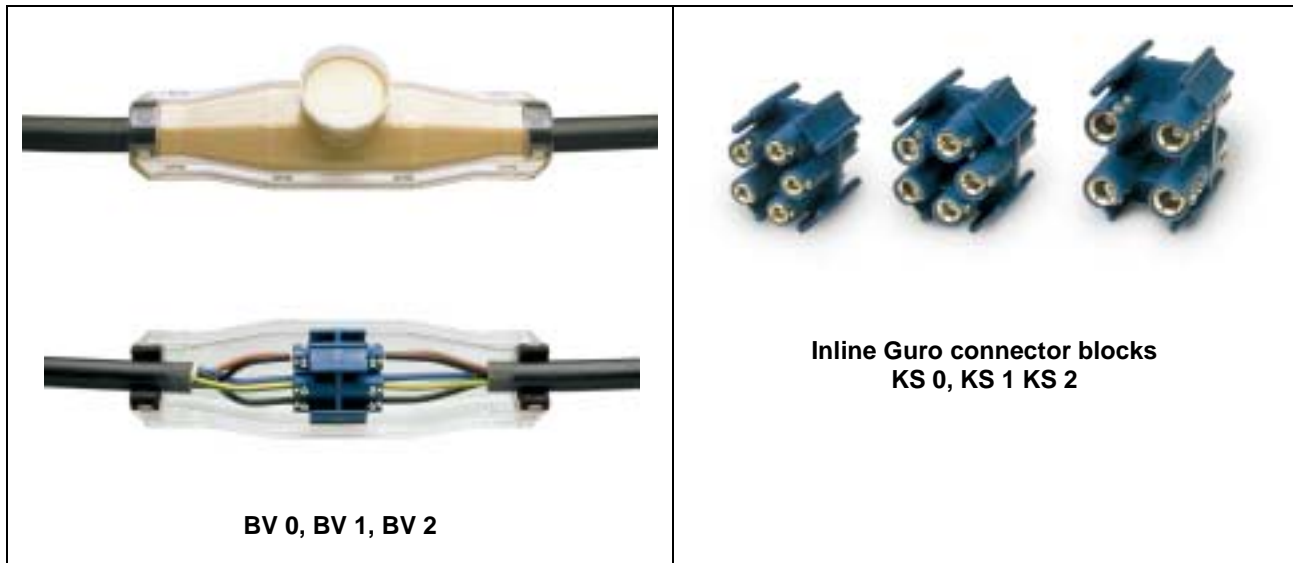


## Inline filled joints for polymeric insulated cables 1 kV



### Cable

The joints are designed for 3,5-, 4 and 5-core polymeric insulated cables without armour up to 25 mm<sup>2</sup>.

For example: SZAMiKAtM, KAtM, N(A)YY, N(A)YBY, VVG, AVVG, BBГ, ABBГ, YAKY, YKY, YKYFty, AYKY, CYKY, PP 00, XP 00, PP 41, N(A)YC(W)Y

### Design of joints

The joints consist of a shock-resistant, transparent polycarbonate snap-to-close design housing and integrated polymer foams for sealing. The filler material is delivered in a double chamber bags. The inline Guro connector block is pre-engineered and allows a quick and easy connection. A cable diameter range from 13 – 30 mm can be covered.

### Technology

- Using mechanical robust transparent housings
- Easy to assemble, no sawing to the cable diameter needed
- Slim and short joints
- Inline connector blocks available
- Filler materials: Rapid 4100, Rapid 3010 and Guroflex

### Inline joints (closures only)

Nominal voltage U <sub>o</sub> /U (kV)	Cable diameter (mm)	Cross section (mm <sup>2</sup> )	Ordering description	Filler volume (l)	Joint (mm)	
					L	H
0,6/1	13 – 20	5x 1,5 – 6	BV0	0,35	220	73
	16 – 25	5x 6 – 16	BV1	0,35	230	80
	21 – 30	4x16 – 25	BV2	0,55	270	90

**Note:** Filler material see page 14, 15 and 16.

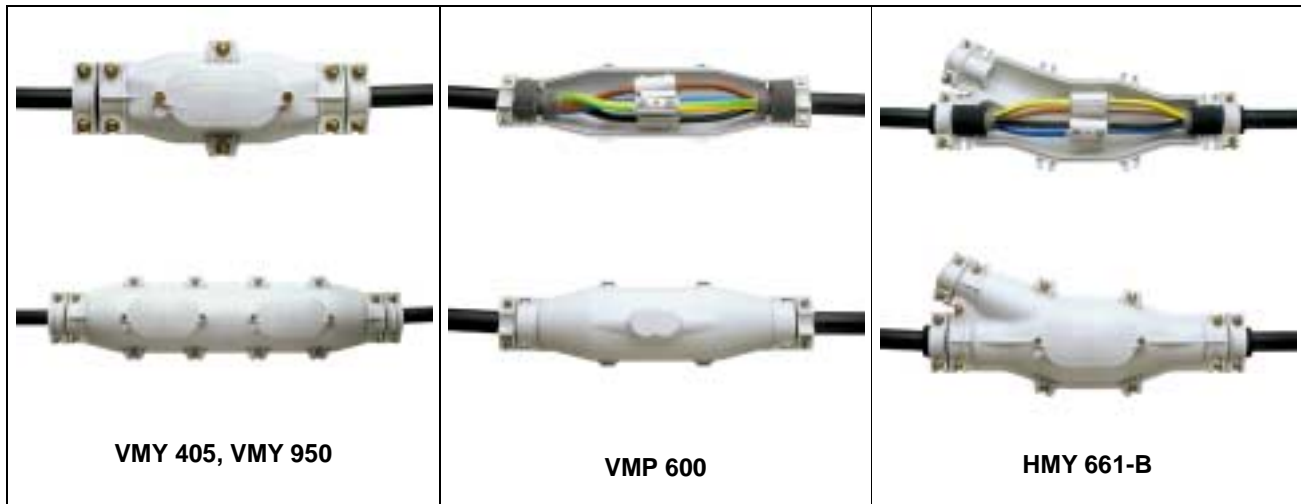
### Inline filled joints without / with inline connector block

Nominal voltage U <sub>o</sub> /U (kV)	Cable diameter (mm)	Cross section (mm <sup>2</sup> )	Ordering description		Joint (mm)	
			Without connector	With connector	L	H
<b>Inline joints with Rapid 4100 filler</b>						
0,6/1	13 – 20	5x 1,5 – 6	BV0-4D	BV0-4D-KS0	220	73
	16 – 25	5x 6 – 16	BV1-4D	BV1-4D-KS1	230	80
	21 – 30	4x16 – 25	BV2-4D	BV2-4D-KS2	270	90
<b>Inline joints with Rapid 3010 filler</b>						
0,6/1	13 – 20	5x 1,5 – 6	BV0-3D	BV0-3D-KS0	220	73
	16 – 25	5x 6 – 16	BV1-3D	BV1-3D-KS1	230	80
	21 – 30	4x16 – 25	BV2-3D	BV2-3D-KS2	270	90
<b>Inline joints with Guroflex filler</b>						
0,6/1	13 – 20	5x 1,5 – 6	BV0-GD	BV0-GD-KS0	220	73
	16 – 25	5x 6 – 16	BV1-GD	BV1-GD-KS1	230	80
	21 – 30	4x16 – 25	BV2-GD	BV2-GD-KS2	270	90

**Note:** All cross sections are according to CENELEC HD 603;

L...Overall length of the housing; H...Overall height of the housing

## Inline filled joints for polymeric insulated cables 1 kV



### Cable

The joints are designed for 3,5-, and 4-core polymeric insulated cables without armour up to 400 mm<sup>2</sup>.

For example: SZAMtKAtM, KAtM, N(A)YY, N(A)YBY, VVG, AVVG, BBΓ, ABBΓ, YAKY, YKY, YKYFty, AYKY, CYKY, PP 00, XP 00, PP 41, N(A)YC(W)Y

### Design of joints

The joints consist of impact-resistant, grey polypropylene snap-to-close design (VMP) or rigid bolted-together polypropylene (VMY, HMY) housings and polymer foams for sealing. The filler material is delivered in double chamber bags (D) or in cans (C). A cable diameter range from 25 – 76 mm can be covered.

### Technology

- Using extremely mechanical robust housings
- Easy to assemble, no adjustment to the cable diameter needed
- Quick and easy installation
- Cable strain relief clamps available
- Filler materials: Rapid 4100, Rapid 3010 and Guroflex

### Inline joints (closures only)

Nominal voltage U <sub>o</sub> /U (kV)	Cable diameter (mm)	Cross section (mm <sup>2</sup> )	Ordering description	Filler volume (l)	Joint (mm)	
					L	H
0,6/1	25 – 40	4x 25 – 70	VMY405	1,60	405	122
	30 – 52	4x 35 – 185	VMP600	4,55	600	163
	44 – 65	4x150 – 240	HMY661-B	6,45	650	200
	44 – 76	4x150 – 400	VMP950	12,90	950	190

**Note:** Filler material see page 14, 15 and 16.

### Inline filled joints without connectors

Nominal voltage U <sub>o</sub> /U (kV)	Cable diameter (mm)	Cross section (mm <sup>2</sup> )	Ordering description	Joint (mm)	
				L	H
<b>Inline joints with Rapid 4100 filler</b>					
0,6/1	25 – 40	4x 25 – 70	VMY405-4D	405	122
	30 – 52	4x 35 – 185	VMP600-4C	600	163
	44 – 65	4x150 – 240	HMY661-B-4C	650	200
	44 – 76	4x150 – 400	VMP950-4C	950	190
<b>Inline joints with Rapid 3010 filler</b>					
0,6/1	25 – 40	4x 25 – 70	VMY405-3D	405	122
	30 – 52	4x 35 – 185	VMP600-3C	600	163
	44 – 65	4x150 – 240	HMY661-B-3C	650	200
	44 – 76	4x150 – 400	VMP950-3C	950	190
<b>Inline joints with Guroflex filler</b>					
0,6/1	25 – 40	4x 25 – 70	VMY405-GD	405	122
	30 – 52	4x 35 – 185	VMP600-GC	600	163
	44 – 65	4x150 – 240	HMY661-B-GC	650	200
	44 – 76	4x150 – 400	VMP950-GC	950	190

**Note:** All cross sections are according to CENELEC HD 603;

L...Overall length of the housing; H...Overall height of the housing

### Inline filled joints with mechanical connectors

Nominal voltage U <sub>o</sub> /U (kV)	Cable diameter (mm)	Cross section (mm <sup>2</sup> )	Ordering description	Connector screw head type	Joint (mm)	
					L	H
<b>Inline joints with Rapid 4100 filler</b>						
0,6/1	25 – 40	4x 25 – 70	VMY405-4D-4896-Z	Grub screw	405	122
	30 – 52	4x 35 – 150(185)	VMP600-4C-4893.1*	Outer hexagonal	600	163
	44 – 65	4x150 – 240	HMY661-B-4C-6997.1**	Outer hexagonal	650	200
	44 – 76	4x150 – 300	VMP950-4C-UST300	Outer hexagonal	950	190
<b>Inline joints with Rapid 3010 filler</b>						
0,6/1	25 – 40	4x 25 – 70	VMY405-3D-4896-Z	Grub screw	405	122
	30 – 52	4x 35 – 150(185)	VMP600-3C-4893.1*	Outer hexagonal	600	163
	44 – 65	4x150 – 240	HMY661-B-3C-6997.1**	Outer hexagonal	650	200
	44 – 76	4x150 – 300	VMP950-3C-UST300	Outer hexagonal	950	190
<b>Inline joints with Guroflex filler</b>						
0,6/1	25 – 40	4x 25 – 70	VMY405-GD-4896-Z	Grub screw	405	122
	30 – 52	4x 35 – 150(185)	VMP600-GC-4893.1*	Outer hexagonal	600	163
	44 – 65	4x150 – 240	HMY661-B-GC-6997.1**	Outer hexagonal	650	200
	44 – 76	4x150 – 300	VMP950-GC-UST300	Outer hexagonal	950	190

**Note:** All cross sections are according to CENELEC HD 603;

L...Overall length of the housing; H...Overall height of the housing

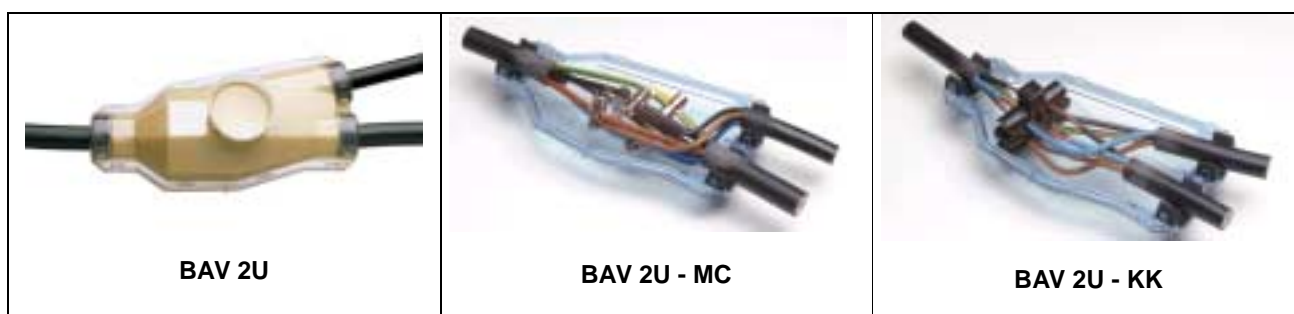
\* 185mm<sup>2</sup> sector shaped must be round pressed

\*\* 150mm<sup>2</sup> only round sector shaped

The grub screw has an inner hexagonal socket.

The outer hexagonal screw type has shear bolts.

## Branch filled joints for polymeric insulated cables 1 kV



### Cable

The joints are designed for 3,5-, 4 and 5-core polymeric insulated cables without armour up to 25 mm<sup>2</sup>.

For example: SZAMiKAtM, KAtM, N(A)YY, N(A)YBY, VVG, AVVG, BBГ, ABBГ, YAKY, YKY, YKYFty, AYKY, CYKY, PP 00, XP 00, PP 41, N(A)YC(W)Y

### Design of joints

The joint consists of a shock-resistant, transparent polycarbonate snap-to-close design housing and integrated polymer foams for sealing. The filler material is delivered in a double chamber bag. The branch connectors allow a quick and easy connection. A cable diameter range from 10 – 30 mm can be covered. Different types of Guro branch connectors are available like single mantle clamps or connector blocks.

### Technology

- Using mechanical robust transparent housing
- Easy to assemble, no sawing to the cable diameter needed
- Slim and short joints
- Filler materials: Rapid 4100, Rapid 3010 and Guroflex

### Branch joint (closure only)

Nominal voltage U <sub>o</sub> /U (kV)	Cable diameter (mm) Main / branch	Cross section Main (mm <sup>2</sup> )	Branch	Ordering description	Filler volume (l)	Joint (mm)	
						L	H
0,6/1	10 – 30	5x1,5 – 25	5x1,5 – 25	BAV2U	0,80	238	110

Note: Filler material see page 14, 15 and 16.

### Branch filled joint without connectors

Nominal voltage U <sub>o</sub> /U (kV)	Cable diameter (mm) Main / branch	Cross section Main (mm <sup>2</sup> )	Branch	Ordering description	Joint (mm)	
					L	H
<b>Branch joint with Rapid 4100 filler</b>						
0,6/1	10 – 30	5x1,5 – 25	5x1,5 – 25	BAV2U-4D	238	110
<b>Branch joint with Rapid 3010 filler</b>						
0,6/1	10 – 30	5x1,5 – 25	5x1,5 – 25	BAV2U-3D	238	110
<b>Branch joint with Guroflex filler</b>						
0,6/1	10 – 30	5x1,5 – 25	5x1,5 – 25	BAV2U-GF	238	110

Note: For Guro branch mantle clamps see page 17 and 18.

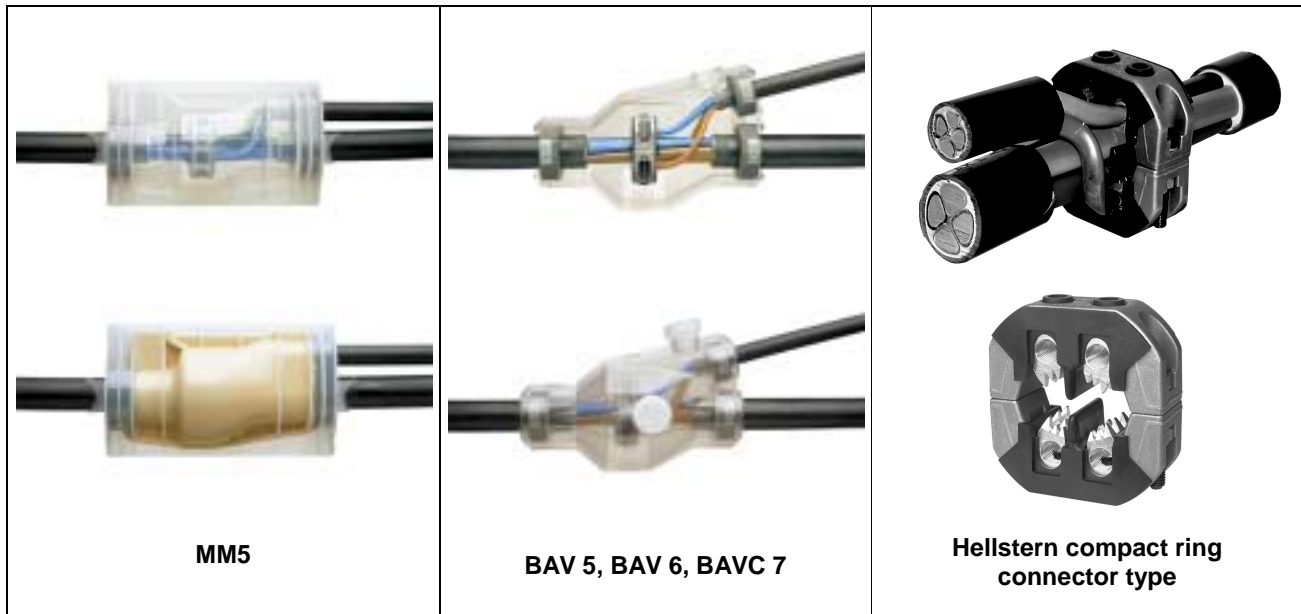
### Branch filled joint including terminal connectors

Nominal voltage U <sub>o</sub> /U (kV)	Cable diameter (mm) Main / branch	Cross section Main (mm <sup>2</sup> )	Branch	Ordering description	Joint (mm)	
					L	H
<b>Branch joint with Rapid 4100 filler</b>						
0,6/1	10 – 30	4x 6 – 25	4x 4 – 10	BAV2U-4D-KK2/4	238	110
	10 – 30	5x10 – 16	5x2,5 – 6	BAV2U-4D-KK2/5	238	110
	10 – 30	5x 6 – 16	5x 6 – 16			
	10 – 30	5x1,5 – 25	5x1,5 – 25	BAV2U-4D-SBBC25U	238	110
10 – 30	5x16 – 25	5x16 – 25	BAV2U-4D-SBBC25	238	110	
<b>Branch joint with Rapid 3010 filler</b>						
0,6/1	10 – 30	4x 6 – 25	4x 4 – 10	BAV2U-3D-KK2/4	238	110
	10 – 30	5x10 – 16	5x2,5 – 6	BAV2U-3D-KK2/5	238	110
	10 – 30	5x 6 – 16	5x 6 – 16			
	10 – 30	5x1,5 – 25	5x1,5 – 25	BAV2U-3D- SBBC25U	238	110
10 – 30	5x16 – 25	5x16 – 25	BAV2U-3D- SBBC25	238	110	
<b>Branch joint with Guroflex filler</b>						
0,6/1	10 – 30	4x 6 – 25	4x 4 – 25	BAV2U-GD-KK2/4	238	110
	10 – 30	5x10 – 16	5x2,5 – 6	BAV2U-GD-KK2/5	238	110
	10 – 30	5x 6 – 16	5x 6 – 16			
	10 – 30	5x1,5 – 25	5x1,5 – 25	BAV2U-GD- SBBC25U	238	110
10 – 30	5x16 – 25	5x16 – 25	BAV2U-GD- SBBC25	238	110	

Note: All cross sections are according to CENELEC HD 603;

L...Overall length of the housing; H...Overall height of the housing

## Branch filled joints for polymeric insulated cables 1 kV



### Cable

The joints are designed for 3,5-, and 4-core polymeric insulated cables without armour up to 240 mm<sup>2</sup>.  
For example: SZAMtKAtM, KAtM, N(A)YY, N(A)YBY, VVG, AVVG, BBΓ, ABBΓ, YAKY, YKY, YKYFty, AYKY, CYKY, PP 00, XP 00, PP 41, N(A)YC(W)Y

### Design of joints

The joints consist of impact-resistant, transparent polypropylene snap-to-close design (MM5) or impact-resistant, transparent polycarbonate snap-to-close design (BAV) housings and polymer foams for sealing. The filler material is delivered in double chamber bag (D) or in cans (C). A cable diameter range from 27 – 65 mm can be covered.

### Technology

- Using mechanical robust housings
- Easy to assemble, no adjustment to the cable diameter needed
- Cable strain relief clamps available
- Compact ring connectors available
- BAV can be assembled in different positions
- Filler materials: Rapid 4100, Rapid 3010 and Guroflex

### Branch joints (closures only)

Nominal voltage U <sub>o</sub> /U (kV)	Cable diameter (mm) Main / branch	Cross section		Ordering description	Filler volume (l)	Connector dia. max. (mm)	Joint (mm)	
		Main (mm <sup>2</sup> )	Branch				L	H
0,6/1	27 – 55 / 16 – 36	4x 35 – 150	4x6 – 70	MM5	1,60	105	295	175
	27 – 56 / 16 – 37	4x 35 – 150	4x6 – 70	BAV5	2,15	105	328	110
	30 – 58 / 16 – 40	4x 50 – 185	4x6 – 95	BAV6	2,40	115	348	203
	45 – 65 / 16 – 50	4x120 – 240	4x6 – 150	BAVC7	5,90	140	484	212

**Note:** Filler material see page 14, 15 and 16.

**Note:** Typical cross sections used with compact ring connectors according to CENELEC HD 603.

### Branch filled joints without connectors

Nominal voltage U <sub>o</sub> /U (kV)	Cable diameter (mm) Main / branch	Cross section		Ordering description	Joint (mm)	
		Main (mm <sup>2</sup> )	Branch		L	H
<b>Branch joint with Rapid 4100 filler</b>						
0,6/1	27 – 55 / 16 – 36	4x 35 – 150	4x6 – 70	MM5-4D	295	175
	27 – 56 / 16 – 37	4x 35 – 150	4x6 – 70	BAV5-4D	328	165
	30 – 58 / 16 – 40	4x 50 – 185	4x6 – 95	BAV6-4D	348	203
	45 – 65 / 16 – 50	4x120 – 240	4x6 – 150	BAVC7-4C	484	212
<b>Branch joint with Rapid 3010 filler</b>						
0,6/1	27 – 55 / 16 – 36	4x 35 – 150	4x6 – 70	MM5-3D	295	175
	27 – 56 / 16 – 37	4x 35 – 150	4x6 – 70	BAV5-3D	328	165
	30 – 58 / 16 – 40	4x 50 – 185	4x6 – 95	BAV6-3D	348	203
	45 – 65 / 16 – 50	4x120 – 240	4x6 – 150	BAVC7-3C	484	212
<b>Branch joint with Guroflex filler</b>						
0,6/1	27 – 55 / 16 – 36	4x 35 – 150	4x6 – 70	MM5-GD	295	175
	27 – 56 / 16 – 37	4x 35 – 150	4x6 – 70	BAV5-GD	328	165
	30 – 58 / 16 – 40	4x 50 – 185	4x6 – 95	BAV6-GD	348	203
	45 – 65 / 16 – 50	4x120 – 240	4x6 – 150	BAVC7-GC	484	212

**Note:** For BAV products cable strain relief clamps can be ordered separately.

L...Overall length of the housing; H...Overall height of the housing;

**Branch filled joints for 4-core cables including compact ring connector**

Nominal voltage U <sub>o</sub> /U (kV)	Cross section (mm <sup>2</sup> )		Ordering description	Joint (mm)	
	Main rm, sm / re, se	Branch rm, sm / re, se		L	H
<b>Branch joint with Rapid 4100 filler</b>					
0,6/1	35- 70 / 50- 95	6- 50 / 6- 70	MM5-4D-4874	295	175
	70-120 / 95-150	6- 50 / 6- 70	MM5-4D-6875	295	175
	35- 70 / 50- 95	6- 50 / 6- 70	BAV5-4D-4874	328	165
	70-120 / 95-150	6- 50 / 6- 70	BAV5-4D-6875	328	165
	150 / 185	6- 70 / 6- 70	BAV6-4D-6878	348	203
	185 / 240	6- 70 / 6- 70	BAV6-4D-6879	348	203
	240 / -	6- 70 / 6- 70	BAVC7-4C-6880	484	212
	- / 150	10- 95 / 16-120	BAVC7-4C-5877	484	212
<b>Branch joint with Rapid 3010 filler</b>					
0,6/1	35- 70 / 50- 95	6- 50 / 6- 70	MM5-3D-4874	295	175
	70-120 / 95-150	6- 50 / 6- 70	MM5-3D-6875	295	175
	35- 70 / 50- 95	6- 50 / 6- 70	BAV5-3D-4874	328	165
	70-120 / 95-150	6- 50 / 6- 70	BAV5-3D-6875	328	165
	150 / 185	6- 70 / 6- 70	BAV6-3D-6878	348	203
	185 / 240	6- 70 / 6- 70	BAV6-3D-6879	348	203
	240 / -	6- 70 / 6- 70	BAVC7-3C-6880	484	212
	- / 150	10- 95 / 16-120	BAVC7-3C-5877	484	212
<b>Branch joint with Guroflex filler</b>					
0,6/1	35- 70 / 50- 95	6- 50 / 6- 70	MM5-GD-4874	295	175
	70-120 / 95-150	6- 50 / 6- 70	MM5-GD-6875	295	175
	35- 70 / 50- 95	6- 50 / 6- 70	BAV5-GD-4874	328	165
	70-120 / 95-150	6- 50 / 6- 70	BAV5-GD-6875	328	165
	150 / 185	6- 70 / 6- 70	BAV6-GD-6878	348	203
	185 / 240	6- 70 / 6- 70	BAV6-GD-6879	348	203
	240 / -	6- 70 / 6- 70	BAVC7-GC-6880	484	212
	- / 150	10- 95 / 16-120	BAVC7-GC-5877	484	212

**Branch filled joints for 3 ½-core cables including compact ring connector**

Nominal voltage U <sub>o</sub> /U (kV)	Cross section (mm <sup>2</sup> )			Ordering description	Joint (mm)	
	Main rm, sm / re, se	Neutral rm, sm / re, se	Branch rm, sm / re, se		L	H
<b>Branch joint with Rapid 4100 filler</b>						
0,6/1	70-120 / 95-150	35-70 / 50-95	6- 50 / 6- 70	MM5-4D-4875	295	175
	70-120 / 95-150	35-70 / 50-95	6- 50 / 6- 70	BAV5-4D-4875	328	165
	150 / 185	70 / 70	6- 50 / 6- 50	BAV6-4D-6878.3	348	203
	185 / 240	95 / 95	6- 50 / 6- 50	BAVC7-4C-6879.3	484	212
<b>Branch joint with Rapid 3010 filler</b>						
0,6/1	70-120 / 95-150	35-70 / 50-95	6- 50 / 6- 70	MM5-3D-4875	295	175
	70-120 / 95-150	35-70 / 50-95	6- 50 / 6- 70	BAV5-3D-4875	328	165
	150 / 185	70 / 70	6- 50 / 6- 50	BAV6-3D-6878.3	348	203
	185 / 240	95 / 95	6- 50 / 6- 50	BAVC7-3C-6879.3	484	212
<b>Branch joint with Guroflex filler</b>						
0,6/1	70-120 / 95-150	35-70 / 50-95	6- 50 / 6- 70	MM5-GD-4875	295	175
	70-120 / 95-150	35-70 / 50-95	6- 50 / 6- 70	BAV5-GD-4875	328	165
	150 / 185	70 / 70	6- 50 / 6- 50	BAV6-GD-6878.3	348	203
	185 / 240	95 / 95	6- 50 / 6- 50	BAVC7-GC-6879.3	484	212
<b>Branch joint with Guroflex filler</b>						
0,6/1	70-120 / 95-150	35-70 / 50-95	6- 50 / 6- 70	MM5-GD-4875	295	175
	70-120 / 95-150	35-70 / 50-95	6- 50 / 6- 70	BAV5-GD-4875	328	165
	150 / 185	70 / 70	6- 50 / 6- 50	BAV6-GD-6878.3	348	203
	185 / 240	95 / 95	6- 50 / 6- 50	BAVC7-GC-6879.3	484	212
<b>Branch joint with Guroflex filler</b>						
0,6/1	70-120 / 95-150	35-70 / 50-95	6- 50 / 6- 70	MM5-GD-4875	295	175
	70-120 / 95-150	35-70 / 50-95	6- 50 / 6- 70	BAV5-GD-4875	328	165
	150 / 185	70 / 70	6- 50 / 6- 50	BAV6-GD-6878.3	348	203
	185 / 240	95 / 95	6- 50 / 6- 50	BAVC7-GC-6879.3	484	212
<b>Branch joint with Guroflex filler</b>						
0,6/1	70-120 / 95-150	35-70 / 50-95	6- 50 / 6- 70	MM5-GD-4875	295	175
	70-120 / 95-150	35-70 / 50-95	6- 50 / 6- 70	BAV5-GD-4875	328	165
	150 / 185	70 / 70	6- 50 / 6- 50	BAV6-GD-6878.3	348	203
	185 / 240	95 / 95	6- 50 / 6- 50	BAVC7-GC-6879.3	484	212
<b>Branch joint with Guroflex filler</b>						
0,6/1	70-120 / 95-150	35-70 / 50-95	6- 50 / 6- 70	MM5-GD-4875	295	175
	70-120 / 95-150	35-70 / 50-95	6- 50 / 6- 70	BAV5-GD-4875	328	165
	150 / 185	70 / 70	6- 50 / 6- 50	BAV6-GD-6878.3	348	203
	185 / 240	95 / 95	6- 50 / 6- 50	BAVC7-GC-6879.3	484	212

**Note:** All cross sections are according to CENELEC HD 603;  
L... Overall length of the housing; H... Overall height of the housing;  
Other housings like T-type joints are available on request.

## RAPID 4100 – 2-component Polyurethane filler material



### Properties

Rapid 4100 is a hydrophobic, polyurethane-based 2-component resin. Rapid 4100 can be used for all underground cable joint systems up to 1kV. Rapid 4100 has excellent insulating properties and is suitable for XLPE, PE and PVC insulated cables.

### Handling

The resin is available either in double chamber bags or in cans. Immediately before filling the entire joint area both components will be mixed in order to start the cross-linking process. The mixture has a pot life of about 15 minutes and after that hardening starts. Immediately after filling the ditch can be closed.

### Technical data

- Density: Comp.A (Polyol) 1,26 g/cm<sup>3</sup>  
Comp.B (Isocyanate) 1,24 g/cm<sup>3</sup>
- Viscosity @ 20°C: Comp.A 3000 mPa s  
Comp.B 300 mPa s
- Pot life @ 5°C: ~ 25 min  
@ 23°C: ~ 14 min  
@ 35°C: ~ 10 min
- Max. reaction temp. (300ml): 75° C
- Hardness Shore D: ~ 30 - 40
- Tensile strength: 5 MPa
- Elongation to break: 45 %
- Min. installation / storage temp.: 5° C
- Shelf life: 2 years @ 23° C
- Color: Brown

Volume (~ l)	Weight (~ kg)	Double Chamber bags	Cans	Joints used
0,35	0,44	PU4D035	-	BV0, BV1
0,55	0,69	PU4D055	-	BV2
0,8	1,00	PU4D080	-	BAV2
1,4	1,75	PU4D140	-	MM5
1,6	2,00	PU4D160	PU4C160	VMY405, MM5
1,7	2,13	PU4D170	PU4C170	MM5
2,0	2,50	PU4D200	PU4C200	BAV5
2,4	3,00	PU4D240	PU4C240	BAV6
3,7	4,63	-	PU4C370	-
4,8	6,00	-	PU4C480	VMP600
5,7	7,13	-	PU4C570	BAVC7
6,5	8,13	-	PU4C650	HMY661-B, VMY950

**Note:** Other sizes on request

# RAPID 3010 – 2-component Polyurethane filler material



### Properties

Rapid 3010 is a hydrophobic, polyurethane-based 2-component resin which fulfills the requirement of E DIN VDE 0291-2:06.97. Rapid 3010 can be used for all underground cable joint systems up to 1kV. Rapid 3010 has excellent insulating properties and is suitable for XLPE, PE and PVC insulated cables.

### Handling

The resin is available either in double chamber bags or in cans. Immediately before filling the entire joint area both components will be mixed in order to start the cross-linking process. The mixture has a pot life of about 15 minutes and after that hardening starts. Immediately after filling the ditch can be closed.

### Technical data

- Density: Comp.A (Polyol) 1,22 g/cm<sup>3</sup>  
Comp.B (Isocyanate) 1,24 g/cm<sup>3</sup>
- Viscosity @ 20°C: Comp.A 3000 mPa s  
Comp.B 300 mPa s
- Pot life @ 5°C: ~ 26 min  
@ 23°C: ~ 13 min  
@ 35°C: ~ 9 min
- Max. reaction temp. (300ml): 80° C
- Hardness Shore D: ~ 45 - 50
- Tensile strength: 8 MPa
- Elongation to break: 45 %
- Min. installation / storage temp.: 5° C
- Shelf life: 2 years @ 23° C
- Color: Blue

Volume (~ l)	Weight (~ kg)	Double Chamber bags	Cans	Joints used
0,35	0,43	PU3D035	-	BV0, BV1
0,55	0,68	PU3D055	-	BV2
0,8	0,98	PU3D080	-	BAV2
1,4	1,72	PU3D140	-	MM5
1,6	1,97	PU3D160	PU3C160	VMY405, MM5
1,7	2,09	PU3D170	PU3C170	MM5
2,0	2,46	PU3D200	PU3C200	BAV5
2,4	2,95	PU3D240	PU3C240	BAV6
3,7	4,55	-	PU3C370	-
4,8	5,90	-	PU3C480	VMP600
5,7	7,01	-	PU3C570	BAVC7
6,5	8,00	-	PU3C650	HMY661-B, VMY950

**Note:** Other sizes on request



## GUROFLEX – 2-component environmental friendly filler material



### Properties

Guroflex is an economical safe, easy to handle soft elastically hardening 2-component casting material based on hydrocarbone resins. Guroflex can be used for all self-supporting underground cable joint systems up to 1kV. Guroflex is suitable for XLPE, PE, PVC and paper insulated cables. Guroflex has excellent insulating properties, is hydrophobic and gives excellent corrosion protection.

### Handling

The resin is available either in double chamber bags or in cans. Immediately before filling the entire joint area both components will be mixed in order to start the cross-linking process. The mixture has a pot life of about 10 minutes and the hardening is without heat development. Immediately after filling the ditch can be closed.

### Technical data

- Dielectric strength:  $U_d > 10 \text{ kV/mm}$
- Spec. Dielectric Constant:  $\epsilon_r \sim 4$
- Specific Vol. Resistance:  $Q_D > 10^{13} \Omega\text{cm}$
- Relative Density:  $\rho = 1,22 \text{ g/cm}^3$
- Min. Storage temperature:  $-20^\circ \text{C}$
- Min. Installation temperature:  $-10^\circ \text{C}$
- Hardness Shore A:  $\sim 20$
- Shelf life: 2 years @  $23^\circ \text{C}$
- Color: Green

Volume (~ l)	Weight (~ kg)	Double Chamber bags	Cans	Joints used
0,35	0,43	GFD035	-	BV0, BV1
0,55	0,67	GFD055	-	BV2
0,8	0,98	GFD080	-	BAV2
1,4	1,71	GFD140	-	MM5
1,6	1,95	GFD160	GFC160	MY405, MM5
1,7	2,07	GFD170	GFC170	MM5
2,0	2,44	GFD200	GFC200	BAV5
2,4	2,93	GFD240	GFC240	BAV6
3,7	4,51	-	GFC370	-
4,8	5,86	-	GFC480	VMP600
5,7	6,95	-	GFC570	BAVC7
6,5	7,93	-	GFC650	HMY661-B, VMY950

**Note:** Other sizes on request

# Guro Connector Blocks

## Inline connector blocks

Cross Section (mm <sup>2</sup> )	Ordering description	Packaging Size pcs
5x1,5 – 5x 6	KS 0	15
5x6 – 5x16	KS 1	12
4x16 – 4x25	KS 2	10



## Branch connector blocks

Cross Section Main (mm <sup>2</sup> )	Branch (mm <sup>2</sup> )	Ordering description	Packaging Size pcs
5x 6 – 5x16	See table	KK 2/5	1
4x10 – 4x25	See table	KK 2/4	1

### KK2/5: 10 – 16mm<sup>2</sup>

main (mm <sup>2</sup> )	branch (mm <sup>2</sup> )					
	1,5	2,5	4	6	10	16
6	-	-	-	ok		
10	-	ok	ok	ok	ok	
16	ok	ok	ok	ok	ok	ok

### KK2/4: 16 – 25mm<sup>2</sup>

main (mm <sup>2</sup> )	branch (mm <sup>2</sup> )					
	1,5	2,5	4	6	10	16
6	-	-	-	ok		
10	-	ok	ok	ok	ok	
16	ok	ok	ok	ok	ok	ok



## Universal mantle clamp with individual branch connection and insulator cap

Cross section Main (mm <sup>2</sup> )	Branch (mm <sup>2</sup> )	Ordering description
2,5 – 25	1,5 - 25	MC25U-I

Note: Mantel clamps are available in packaging sizes of 4, 5 and 100 pieces



**Mantle clamps with insulator caps**

Cross section		Ordering description
Main (mm <sup>2</sup> )	Branch (mm <sup>2</sup> )	
2,5 – 6		MC06-I
10 – 16	See tables	MC16-I
16 – 25		MC25-I

**Note:** Mantel clamps are available in packaging sizes of 4, 5 and 100 pieces

**MC06-I: 2,5 – 6mm<sup>2</sup>**

main (mm <sup>2</sup> )	branch (mm <sup>2</sup> )			
	1,5	2,5	4	6
2,5	-	ok		
4	ok	ok	ok	
6	ok	ok	ok	ok

**MC16-I: 10 – 16mm<sup>2</sup>**

main (mm <sup>2</sup> )	branch (mm <sup>2</sup> )					
	2,5	4	6	10	16	25
10	-	-	-	ok		
16	-	-	ok	ok	ok	
25	ok	ok	ok	ok	ok	ok

**MC25-I: 16 – 25mm<sup>2</sup>**

main (mm <sup>2</sup> )	branch (mm <sup>2</sup> )					
	2,5	4	6	10	16	25
10	-	-	-	ok		
16	-	-	ok	ok	ok	
25	ok	ok	ok	ok	ok	ok



**Mantle clamp without insulator cap**

Cross section		Ordering description
Main (mm <sup>2</sup> )	Branch (mm <sup>2</sup> )	
16 – 25	See table	MC25-5

**Note:** Mantel clamps are available in packaging sizes of 4, 5 and 100 pieces

**MC25: 16 – 25mm<sup>2</sup>**

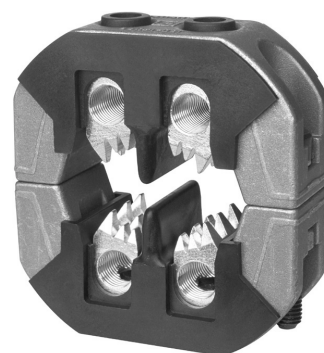
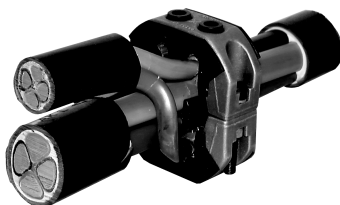
main (mm <sup>2</sup> )	branch (mm <sup>2</sup> )					
	2,5	4	6	10	16	25
10	-	-	-	ok		
16	-	-	ok	ok	ok	
25	ok	ok	ok	ok	ok	ok



## Hellstern insulation piercing multi-core connectors

The Hellstern cable ring type connector is specially designed for simple and reliable installation while ensuring maximum safety during life line work.

The connectors are suitable for aluminium or copper, for stranded or solid conductors and cables with PVC or XLPE insulation. The compact design allows installation in reduced size resin filled boxes and in Raychem heat-shrinkable Rayligator joints.



### Installation

Cable oversheath is removed and the core separators placed between the cores. The two connector halves positioned over the cores and the bolts slightly tightened. Stripped ends of branch cores inserted in the branch channels and the bolts are tightened. The connector halves are closed by tightening the two outer bolts while the contact segments pierce the main cable cores. The outer metal ring is at all times insulated from the life conductors.

- For 4- and for 3 ½ core cables
- Contact segments with integrated depth limitation
- Branch channels with grooves
- No torque moment key required
- Exceeds requirements according to VDE 0220

### Materials:

- Body: High strength aluminium alloy
- Contact segment: electro tinned brass
- Insulation parts: Glass fibre reinforced polymer
- Bolts: Tinned steel 12.9

### Conductors types:

- sm: Sector stranded.
- se: Sector solid.
- rm: Round stranded
- re: Round solid.

## Cable ring type connector for 4-core cables

Ordering description standard version	branch with shear head	Main conductor rm/sm (mm <sup>2</sup> )	re/se (mm <sup>2</sup> )	Branch conductor rm/sm (mm <sup>2</sup> )	re/se (mm <sup>2</sup> )	Dimensions A / B / circle (mm)	Width across flats (mm)	Weight (kg/100pcs)
HEL-4874-35re		-	35re	6- 50	6- 70	87/ 87/ 96	6 / 5	42,4
HEL-4874	HEL-4874-AK	35- 70	50- 95	6- 50	6- 70	87/ 87/ 96	6 / 5	42,4
HEL-6874	HEL-6874-AK	50- 70	70- 95	6- 50	6- 70	87/ 87/ 96	6 / 5	42,6
HEL-6875	HEL-6875-AK	70-120	95-150	6- 50	6- 70	87/ 87/ 96	6 / 5	42,2
HEL-6876	HEL-6876-AK	95-120	120-150	6- 50	6- 70	91/ 87/100	6 / 5	44,6
HEL-6877	HEL-6877-AK	95-120	120-150	10- 95/ 35-120	16-120/ 50-150	100/120/125	6 / 6	46,0
HEL-6878	-	150	185	6- 70	6- 70	103/ 93/115	6 / 5	60,0
HEL-6879	-	185	240	6- 70	6- 70	110/115/124	8 / 5	69,4
HEL-6880	-	240	-	6- 70	6- 70	110/115/124	8 / 5	69,4
HEL-5876	HEL-5876-AK	-	120-150	6- 50	6- 70	91/ 87/ 98	6 / 5	46,0
HEL-5877	HEL-5877-AK	-	120-150	10- 95/ 35-120	16-120/ 50-150	100/120/125	6 / 6	46,0

A-height, B-width

## Cable ring type connector for 3 ½-core cables with reduced cross section of neutral conductor

Ordering description	Main phase conductor rm/sm (mm <sup>2</sup> )	re/se (mm <sup>2</sup> )	neutral conductor rm/sm (mm <sup>2</sup> )	re/se (mm <sup>2</sup> )	Branch conductor rm/sm (mm <sup>2</sup> )	re/se (mm <sup>2</sup> )	Dimensions A / B / circle (mm)	Width across flats (mm)	Weight (kg/100pcs)
HEL-4875.3	70-120	95-150	35- 70	50- 95	6- 50	6- 70	87/ 87/ 95	6 / 5	42,2
HEL-6878.3	150	185	70	70	6- 50*	6- 50	110/115/115	6 / 5	63,8
HEL-6879.3	185	240	95	95	6- 50	6- 50	110/115/124	8 / 5	73,2
HEL-6880.3	240		120	120	6- 50	6- 50	110/115/124	8 / 5	72,2

A-height, B-width